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THE JOURNAL OF PHILOSOPHY

PARETO AND THE PHILOSOPHERS[1]

POWERFUL indeed is the lure of social physics. Ever since Descartes, the hope of bringing human behavior within the scope of his *mathesis universalis* has attracted aspiring social scientists. With every advance in the physical sciences, there have arisen fresh demands for comparable triumphs through the application of identical or similar methods of measurement and proof to social phenomena. Whether by deduction or induction or both, human relationships must be made as intelligible and manageable as those of sticks and stones, by being clearly conceived in terms of gravitation, inertia, forces in equilibrium in space and time. The seventeenth century abounds in crude systems of social mathematics, social astronomy, social mechanics; and since the beginning of the nineteenth, their number has greatly increased. Leibniz and Berkeley, to mention only a few, dabbled in social physics; Jeremy Bentham produced an elaborate calculus of conduct; and Henri de Saint-Simon imagined himself called to become the Newton of the new "positive" sciences of society, leaving it to Auguste Comte to give both name and substance to the crowning discipline of *sociologie*.

Since Comte the ascendancy of the positive approach has been complete, but there has been little agreement among would-be social scientists concerning fundamental concepts or units of measurement, to say nothing of their interpretation. Henri Poincaré epitomized the situation in his famous reference to sociology as the science with the most methods and the least results. As in psychology, where there are still only psychologies, so in sociology, there are only sociologies. The universal "science of society" so eagerly awaited a few generations ago has never materialized; and few attempts are made any longer to reach that fascinating goal. One of the most acclaimed and pretentious, certainly, of such attempts was that of

[1] *The Mind and Society.* (*Trattato di Sociologia Generale.*) VILFREDO PARETO. Edited by Arthur Livingston. Translated by Andrew Bongiorno and Arthur Livingston with the advice and active coöperation of James Harvey Rogers. Vol. I, Non-Logical Conduct. Vol. II, Analysis of Sentiment (Theory of Residues). Vol. III, Sentiment in Thinking (Theory of Derivations). Vol. IV, The General Form of Society. New York: Harcourt, Brace and Company. 1935. 4 vols. xviii + 2033 pp. $20.00.

Pareto's General Sociology: A Physiologist's Interpretation. LAWRENCE J. HENDERSON. Cambridge: Harvard University Press. 1935. vii + 119 pp. $1.25.

Vilfredo Pareto, Italian Marquis, engineer, and professor of economics in the University of Lausanne until his death in 1923. Completed just before the war, published in 1916 under the title of *Trattato di Sociologia Generale,* and known in French since 1917, the nearly one million words of the original have at last been rendered available in English as *The Mind and Society* under the editorship of Professor Arthur Livingston of Columbia University.

For the enormous and effective labors lavished upon the translation by the editor and his associates during the past fifteen years there can hardly be too much praise.[2] They have worked with an ardor and devotion which seems characteristic of the American admirers of Pareto, and which makes them appear far more like a cult with a gospel than a group of sober scientists. If their idol receives a partisan reception, most of the blame must attach to these over-enthusiastic followers of his. When one of them recalls that he "imported that slogan ('Karl Marx of the bourgeoisie') for his campaigns for Pareto in the early twenties," his language smacks more of the stump than of the laboratory. Both the master and his disciples make all but favorable criticism difficult by placing the book on a series of pedestals beyond the reach of ordinary mortals. Nearly everyone who ventures to challenge its greatness will find himself subtly disqualified in advance. First we are told, quite without humor, that "it is definitely not intended for the plain man," since the author felt that "certain truths which history reveals can do more harm than good" if they become known to nonmembers of the "ruling-classes of the western world." Then there is the alleged scientific disqualification: only adepts of the physical sciences and of engineering can hope to comprehend the basic concepts and mathematical intricacies of the former Turin polytechnician. Even should one feel competent to read the four long volumes, that, according to a literary idolater of Pareto, is hardly a beginning: "It is a book to be learned as one learns the integral calculus . . . that will take considerably more than three weeks. . . ." Beyond this there are a number of special occupational disbarments, for the same authority informs us that the work simply "can not be reviewed" by literary critics or professional philosophers. Finally, over every dissenter hangs a blanket charge: if he does not accept the author's analysis of the sentiments, he auto-

[2] Curiously enough, Professor Livingston checked Pareto's countless footnotes with amazing care, only to fall into two errors in his own comments citing American examples: Chick Sales (p. 884) should be Chic Sale; and Governor Rolfe (p. 1519) should be Rolph. It is also to be noted that the dates of publication of the works cited by Pareto are given only occasionally; this is especially regrettable in view of Pareto's tendency to minimize chronological considerations in selecting his examples.

matically becomes an example of it—it is because his own miserable biases are blinding him to the truth. Pareto himself seems to have expected to be misunderstood by practically everybody, and took few pains to conceal his contempt for most of his potential readers. Thanks in part to his peculiar methods of composition (he wrote on separate sheets of cellulose which became the 2,612 numbered paragraphs of the completed treatise), his work is choppy, badly organized, repetitious, cluttered with numerical apparatus, and insufferably long-winded. But Pareto is not the first ruling-class intellectual to display his disdain for the rest of humanity by learned cryptography.

Among the less ecstatic Paretians, perhaps, is to be numbered Professor Lawrence J. Henderson, who has conducted a seminar on Pareto at Harvard for several years, acting also as godfather to an introductory volume by two of his students in 1934.[3] But even Professor Henderson's own brief essay and commentary can not refrain from hailing the *Trattato* as "a work of genius" constituting the only substantial advance "in scientific description and logical analysis of the influence of the sentiments on human affairs" since Machiavelli, who also wrote "what men do and not what they ought to do." In the face of the above-mentioned *caveats,* and of such an estimate from an eminent physiologist who claims to judge the work strictly as a "scientific treatise," it may seem that a discreet silence best becomes the philosophical critic. Scientific books should perhaps be left to scientists to evaluate. But, as has already been indicated, the status of sociology as a science is still much beclouded in uncertainties; and the *Trattato* is no ordinary textbook of the subject. Both its Italian and its English titles are woefully misleading. It differs markedly from the conventional statements of general sociological principles, and goes out of its way to launch attacks upon philosophers, without deserving any such grandiose label as *The Mind and Society.* Some such phrase as "The Sentiments and Society" would have been far more accurate as a description of its variegated contents.

At the nature of those contents no brief account can possibly more than hint. One can only arouse a few reasonable expectations concerning what the reader will find, and urge him to form his own conclusions at first-hand. From one point of view, they seem to comprise a vast "museum of human stupidity" drawn from Greek and Latin literature and from innumerable clippings from European newspapers of the pre-war era. From another perspective, the colossal enterprise looms like a super-positivism by a Comte who is

[3] Homans, George C., and Curtis, Charles P., Jr., *An Introduction to Pareto, His Sociology.* New York: A. A. Knopf. 1934.

determined never to meet a Clotilde de Vaux. Still others will regard the book as one long (and somewhat belated) exposure of man's stubborn tendencies to rationalize his impulses—a veritable armory of weapons for anti-intellectuals. To Professor Henderson, its chief contribution is methodological, in its pioneering application to human societies of the Gibbsian notion of a system embracing many variables in a state of mutual dependence, the non-logical sentiments being the most important. Some will continue to insist that Pareto, whether intentionally or not, supplies the basis and background for a *Machtpolitik* which may bear any one of a hundred party labels as long as its manipulators are ruthlessly leonine members of the truly *élite*. All these expectations have some foundation in actuality; and yet it can not be said that any one of them is fully realized. Pareto disappoints all those who look for completeness; his wisdom is in insights and details. At the same time the need of technical invention and clarification on the large scale in the social studies is so desperate that no promise, even of the slightest assistance, should be overlooked.

No edifice is stronger than its foundations; and to the philosopher's eye it is upon the book's first chapter that the unwieldy superstructure rests. Pareto begins, as he is fully entitled to do, by defining and re-defining "The Scientific Approach" to sociology as he envisages it. It is that of social mechanics *redivivus*, but purged of the deductive absolutism and wishful thinking that have been the undoing of all his predecessors and contemporaries. In one of the most characteristic of the many statements of his aim, he says:

> We are trying to follow in sociology the path trodden before us by astronomers, physicists, chemists, geologists, botanists, zoölogists, physiologists, in short, by all natural scientists of modern times; and to avoid, so far as within us lies, the road that led the Church Fathers to denying the existence of antipodes, and Hegel to prattling about mechanics, chemistry, and other similar sciences—and which is generally followed by metaphysicians, theologians, and men of letters in studies that pretend to deal with facts of nature but which in reality are a mere hotchpotch of sentiments [69, n. 5].[4]

By his ridicule of Hegel's *Philosophy of Nature* as "overstepping the limits of comic absurdity," he gives the false impression that the battle for empiricism in philosophy is still to be won (51). In any event, Pareto proposes to go to the other extreme himself, "the extreme of Nominalism" (always without metaphysical connotations). In his "logico-experimental science," all *a priori*, all speculative, all absolute, all normative elements are to be rigidly eschewed. He will deal with experienced things, not words, and always from the outside as "social facts." A practising behaviorist, he will confine himself

[4] All the numbers used refer to paragraphs in Pareto's text.

to the observed conduct of men and the equations that picture the uniformities in their relationships. In this way he expects to lay bare "the forms of society" just as an astronomer reveals the regularities of the heavenly bodies. But just what uniformities are to be studied, and experimented upon, and why? Pareto sometimes speaks as if all were equally important, but in practice he introduces normative principles of selection, as every sociologist must. In spite of this he holds that the only important differences between the physical and social sciences lie in the possibilities of experiment, and in "the greater or lesser complexity with which the effects of the various laws (uniformities) are intertwined" (99, 100). The actions of men and of insects and of molecules are alike to be judged solely by "objective experience."

Having thus delimited the scope of his inquiry to "the field of experience and observation strictly," Pareto has a legitimate quarrel only with those who pretend to a similar narrowness of aim. Sociologists fortunately supply plenty of broad targets for the critic who demands none but operational meanings for his words. With great delight Pareto addresses himself to the easy task of exposing the "non-logico-experimental" character of the pseudo-positivisms of Herbert Spencer, which is "nothing but a metaphysics," and of Comte, which is even worse, a religion. The accusations have a familiar ring; for the history of positivism has been a series of holier-than-thou allegations that the immediately preceding thinkers have not been sufficiently "scientific." Each one, after his death, is seen to have fallen into non-positivistic presuppositions. Now if it is true that no previous purist of science has been able to elude the clutches of metaphysics, can it be that Pareto alone has been able to escape? Or is it only by concealing the foundations and subjective elements of his own method, and by omitting to define his crucial notion of "social fact," that he is enabled to maintain the illusion of having no metaphysics of his own?

Messrs. Homans and Curtis are more daring than their master in that respect, and thereby give the game away.[5] But for Pareto, facts are just facts, and largely supply their own conceptual frameworks to the observer. "Some small amount of information as to external facts we can derive from knowledge of the processes of the human mind and from language. But that small amount is small indeed, and once a science is at all advanced, more errors than truths

[5] "For us *a fact is a receptor experience, in terms of a conceptual scheme.*" (Italics theirs.) A receptor experience is "anything observed by the five senses"; while conceptual schemes are frames "somehow constructed by the mind, by which it classifies sense experience." Homans, G. C., and Curtis, C. P., Jr., *op. cit.*, pp. 51–52.

are obtained in that fashion'' (108). Thus in his almost morbid anxiety to be scientifically immaculate, and his fear of admitting the slightest influence of the personal equation, Pareto takes the drastic step of cutting off practically all the light on human conduct that comes from within, except that private radiation which he falsely supposes to originate from without. For what he confidently christens with the name of objective experience is honeycombed with subjective elements supplied by himself:—a state of affairs that becomes increasingly evident as his ''induction'' gets under way. This treatment of facts as phenomena known for the most part externally, and the refusal to make any marked distinction between the physical and social sciences in that respect, rest, as Croce pointed out in a letter to Pareto thirty-five years ago, on an implied metaphysical postulate.[6] A detailed analysis of the latter's method would reveal many more, in spite of all his violent disclaimers and his abuse of philosophers for not being scientists in his sense of the term. It goes without saying that any sociologist may adopt any method he chooses, but his conclusions are bound to be judged in view of what he has actually (as well as consciously or explicitly) included or excluded at the start of his inquiry. One may share Pareto's zeal for empiricism, and admire his resolution to look upon social phenomena with ''altogether indifferent eyes''; without supposing either that he always lives up to his good intentions, or that they relieve him of the duty of acknowledging and defending the postulates which he chooses to employ.

On the score of impartiality, the fact is that few books have ever combined such vehement protestations of scientific detachment with quite so many evidences of incurable prejudice on the part of its author. Pareto does great service to the cause of scientific disinterestedness by pointing out the sentimental motes in the eyes of others, only to miss the beam in his own. A keen diagnostician of the irrational, and even aware of some of his own symptoms, himself he could not, or would not cure. The list of things which he detested was a long one, and evidences of his elderly crochets keep breaking through his determined pose as dispassionate naturalist of society. In the midst of presumably objective descriptions of the frailties of others, he rages against ''metaphysicists,'' modernist theologians, pacifists, humanitarians, democrats, Marxians, Christian Scientists, Rousseau, Tolstoi, Lloyd George and the Welsh, but most particularly and incessantly against Senator Bérenger and his fellow-Comstocks. Those of his admirers who can not see any departure from the factual in these petulant explosions, or who regard them

[6] Letter dated October 20, 1900, translated in Croce, Benedetto, *Historical Materialism and the Economics of Karl Marx*, p. 178.

as insignificant "asides," must certainly incur the suspicion of sharing their master's emotional antipathies. Someone with a taste for irony should analyze Paretians in their own terminology.

Pareto's primary classification of human conduct divides it arbitrarily and with no great clearness into two groups which he labels *logical* and *non-logical.* Logical actions are those which are appropriate as means to immediate ends, both in the judgment of the person performing them and in that of other persons who have a more extensive knowledge; all others are non-logical. Logical actions are most abundant in civilized societies, wherever people know exactly what they are doing in the sense that they have observable ends in view and are using effective means to attain them. Pareto virtually omits all such actions from his own panorama of humanity, which renders the translators' title, *The Mind and Society,* more than faintly ridiculous, and turns his attention to the non-logical, thereby rendering distortion of the picture as a whole inevitable. There his great discovery is the extent to which the subjective versions of our actions and their objective outcomes fail to correspond. Scientific scepticism being a comparatively recent achievement in the history of civilization, this is hardly surprising; and after nearly twenty years the theme has lost some of its original freshness through acquaintance with Bentham, Nietzsche, Sorel, Sumner, Freud, and their numerous disciples. But where they sketch, Pareto documents. It takes him over five hundred paragraphs to reach the hardly startling conclusion that "there are many subjective, sentimental considerations of great potency which prompt people to evolve and accept theories independently of their logico-experimental validity" (516). With heroic tenacity and penetration he explores and charts the dark continent of non-logical behavior, and reveals the countless and ingenious ways in which its true nature is concealed beneath the camouflage of logic. No one escapes in the wholesale unmasking: plain men, politicians, philosophers, and even some scientists are convicted of varnishing their impulses with a film of "what ought to be." No one with a disposition to take words or ideas at their face value (and that, according to the author, includes everyone) should avoid the ordeal of reading chapters II–V.

But when, at the beginning of the second volume, he comes to the transition from the inductive survey of behavior to the deductive formulation of a theory of human nature that will account for what he has found, Pareto must perforce turn psychologist; and it is then that his own "facts" also begin to assume strange subjective guises. The task he has set for himself is to make a beginning in laying bare all the conditioning forces of social equilibria, including those which

lie below the surface of conduct,—forces which can be objectively observed and quantified for the purpose of a mechanics of society. But he has already discovered that the subjective surface of the mind is utterly deceitful, even to itself; and yet it is primarily on that surface, if at all, that the actual drives of human living come to light. Thus he finds himself in the position of a man who, something of a truth-distorter himself, wants to state the truth about lying on the basis of lies about lies. One avenue of escape would be to turn animal psychologist and reject all subjective testimony except one's own. But Pareto does not do this; his volumes are crammed with illustrations drawn from subjective states of mind, and not with minute descriptions of bodily reactions.

In his effort to construct a psychology of sentiments from their manifestations, Pareto resorts to a device not unlike the complexes of the psychoanalysts, and just about as vague and unstable. In the best tradition of nineteenth-century mechanics, he uses constancy (and later, equilibrium) as the key to importance, a normative choice which deflects his whole social system in the direction of conservatism. Where a number of varied non-logical actions seem to be connected with the manifestation of a constant psychological factor, he calls the manifestation a *residue,* and the variable guises which it assumes, *derivations.* The residues are not instincts or sentiments, but register the presence of the latter as mercury in a thermometer indicates a change in temperature (875). Neither are they specific folkways or culture patterns. This mid-way position enables Pareto, who was neither psychologist, anthropologist, nor historian (except in a limited sense), to escape embarrassing entanglements with physiological psychology, on the one hand, and with cultural history on the other.

When he comes to draw up his list of residues in six main classes and some fifty sub-divisions, the subjective arbitrariness of his "following of the facts" for socio-mechanical purposes becomes even more evident. The particular residues listed are somehow "inferred out of" his mass of selected items from classical literature and modern newspapers, and then deductions are made from them. Professor Henderson grants that the residues are classified with only "mediocre success," but sees "the inestimable advantage of any classification over none" in the early stages of scientific development. Strangest of all is the fact that Pareto makes no attempt to use the residues for the purpose for which they were ostensibly constructed, namely, as factors capable of exact measurement and representation in equational form. Detailed criticism of the theory, which is the heart of Pareto's system, although not of his method, must be left to the psychologists; but it is obvious that residues are open to most

of the criticisms brought against the instincts of the social psychologists (which appeared at about the same period) and to many more besides.

Residues far overshadow derivations in importance; and yet Pareto, with much help from Bentham's *Book of Fallacies,* makes a better job of classifying the latter than the former, in which he is far more interested. Derivations are simply a blanket name for all human speech, writing, thought, or other activities which are not strictly scientific or "colorless statements of concrete sensory experience." Naturally they are most plentiful, even in the works of Paretians. Philosophers not only speak in derivations, but vastly overestimate their importance. "What we call residues are in their eyes axioms or dogmas, and the purpose is just the conclusion of a logical reasoning. But since they are not as a rule in any agreement on the derivation, they argue about it till they are blue in the face and think that they can change social conditions by proving a derivation fallacious. That is an illusion on their part. They fail to realize that their hagglings never reach the majority of men, who could not make head or tail to them anyhow, and who in fact disregard them save as articles of faith to which they assent in deference to certain residues. . . . All the masses ask is to be led along the beaten paths . . . (1415 and n. 2). Pareto the scientist is ready and even eager to show how they may be gulled; and, of course, how they might avoid such exploitation. He is never tired of insisting upon the need for a complete divorce between experimental truth and social utility, which "often stand in flat contradiction" (843). His third volume is both a bulging compendium of fallacies and a handbook of mass-manipulation for the politician, the evangelist, and the advertiser. The rulers of any society will be those who profit most by the credulity of their fellows, those who through "greater strength, intelligence, ability, shrewdness, take the lion's share," and have no compunctions about holding it by force if necessary. So far in human history, there has been no right save might; "the rest is talk" (1508).

The analytic phase of the book, which is best regarded as a treasury of penetrating comments on men's failures to be thinking-machines, concludes with Chapter X; and the last eight hundred pages are devoted to an interpretation of European societies in the terms which have been discriminated, using mainly the first two classes of residues and "the circulation of the *élite.*" This is the province of the sociologist, possibly of the philosopher of history, and the barest comment must suffice. Professor Henderson is much impressed by Pareto's adaptation of the abstract system with mutually interdependent variables, as developed in physics and chemistry, for

use in sociology instead of the one-sided cause-effect type of explanation which has been prevalent hitherto. When a social system thus conceived is modified by an added factor, it will tend to return to its former equilibrium very slightly modified. These ideas seem full of promise until one realizes how close to omniscience it would be necessary to approach in order to set up mathematically even the smallest of such social systems. Pareto himself attempts only a first approximation by concentrating on five of the many factors in a society, none of which, with the possible exception of a few economic "interests," is reduced to numerical form.

These immense labors of his to bring human irrationality within the scope of a manageable rational system can only be regarded, in the temperate language of Professor Henderson, as "the spade-work of a pioneer." Even so, he had many more predecessors than he chose to acknowledge, as his editor indicates (2142, n. 1). That he carried forward the quest for a quantitative sociology along a broad front is unquestionable. The fruitfulness of some of his suggestions is apparent; the soundness of others only time will decide. That his analysis of residues and derivations provides "a firm foundation . . . for the study of any of the interactions of men" (Henderson, p. 30) is meanwhile open to serious doubt; in spite of all Pareto's protestations, his "forces" still smack of Comte's metaphysical stage. In the sceptical tradition of Bacon and Bentham, however, he depicts with incomparable fullness the "idols" of human thought, and avoids all but a few of them himself; only to find that he has paid too great a price for immaculateness in the restrictions and omissions which doom many of his conclusions to emptiness. By sticking doggedly to a half-hearted behaviorism, and narrowing the logical virtually to what can be pointed out to the human eye as scientifically useful, he poses, but leaves unsolved, the key-problem of methodology in the social studies: how can we completely illuminate human conduct, internally as well as externally, avoiding error within as surely as without?

His onslaughts upon philosophers are easily explained: some are deserved; many are due to hasty generalizations; and others result from a failure to comprehend that their aims might legitimately differ from his. He seems to have labored under the delusion that all philosophers were trying to dictate to experience and to subordinate the facts to some transcendental principle. An intimate friend recalls that "one of his favorite amusements after dinner was to read aloud to his guests from Italian or French translations of Hegel, which he had a faculty for portraying as the height of unintelligible absurdity. His mirth would start as a normal smile but gradually work up to an explosive laughter which would bring

tears from his eyes and finally compel him to stop."[7] A kindred fixed belief of his was that the basic principle of philosophy was the impossibility of conceiving the falsity of a proposition, without which "metaphysicists would go out of business" (606, n. 1). His attacks on other positivists are understandable, since he felt that they had fallen into the snares of the sentiments while aiming at the common goal of an austerely quantitative sociology. But he seems never to have grasped the idea that anyone could seek, quite unsentimentally, a wider "truth about life" than was his goal. Either one stuck to "logico-experimental" premises, or one did not; there could be no more or less (1533). The long list of his complaints about the major philosophers comes down to that.

In the process he goads the more unrealistic thinkers toward "facing the facts" with many a sharp Veblenian shaft. His fearless puncturing of shams makes stimulating reading, and provides an excellent corrective for the word-worshipping types of intellectuality. But his counter-emphasis upon unreason and his exaltation of force, while they might have been appropriate to pierce the smugness of 1913, are hardly so essential in 1935. Even philosophers are being forced to face plenty of the kinds of facts which he describes. But there is a difference between facing the facts, and facing the bare facts; and a still greater difference between facing all the facts, and facing some of the bare facts. That is the issue between Pareto and the philosophers.

HAROLD A. LARRABEE.

UNION COLLEGE.

SOME MAJOR CONFUSIONS OF CONTEMPORARY POSITIVISM

A CENTURY ago the word "positivism" had meaning and use, it connoted a distinct approach to philosophical speculation; but today, except in this historical reference, it has lost its meaning. It signified then the intention to identify knowledge with natural science, and to define philosophy as a study of the interdependence of the empirical sciences and their intrinsic serial order. This approach was presented as an alternative to the scholastic, transcendental, and other non-empirical speculations still current. All such absolutistic speculation was attacked as "metaphysics" and the positivist regarded his own study as a non-metaphysical analysis of scientific knowledge and not as a metaphysical analysis of reality. Inasmuch as the word "metaphysics" did in fact mean for most

[7] Racca, Vittorio, "Working with Pareto," *Virginia Quarterly Review* (July, 1935), Vol. XI, p. 380.

people the absolutistic sort of speculation decried by the positivist, we need not quarrel with his terminology.

But the word "metaphysics" no longer means what it did. For philosophical students at least it now denotes any study of basic principles, regardless of their source. Just because the positivists of last century were successful in their attempt to discredit a metaphysic based upon supposedly self-evident and certain principles, metaphysics has come to mean an appreciation of the most basic conceptions involved in any branch of natural knowledge, or even in any art.

The logical positivism of Vienna is thus a self-contradiction from the start, in its most initial conception. As positivism, it denies the existence or validity of self-evident principles; but as a logic able to speak authoritatively upon what is good and bad in empirical theory, it assumes the existence and validity of *a priori* principles. Further, the conception of a logical analysis able to regulate the form and future evolution of empirical knowledge is fraught with a host of non-logical decisions as to the nature of man, of his environment, and of their interrelation. The Viennese positivists seem to be quite unaware of these involvements. Logical positivism, writes one of their leaders,[1] practises only logical analysis, and "puts forward no philosophical theses whatsoever." It avoids all metaphysical assumption, accepting as truth only empirical science together with the results of its logical analysis by the positivist. Such statements are intelligible only if metaphysical or philosophical means *a priori;* and then we see that they are self-contradictory, in that the proposed logical analysis is itself understood as an application of *a priori* principles.

But let us estimate the positivist by what he does, or proposes to do, rather than by the title he gives himself, which may turn out to be inappropriate! What will he add to or take from the content of natural science? Surely the latter, as it comes to the positivist from the scientist, has already submitted to as much logical analysis as it will stand. This analysis is what distinguishes scientific theory from scientific data. There is nothing for the logician to do here, and it does not change the situation to call him a positivist. It is easy, however, to see how the positivist enters this confusion. He thinks of logic as a super-mathematics; and since mathematics does in some degree determine the course of physical theory, logic should do so in greater degree. The nature of the relation of mathematical to physical theory, the extent to which either of these disciplines regulates

[1] See *The Unity of Science,* by Rudolf Carnap; with introductions to the positivistic method by the author and translator. This is probably the clearest brief presentation in English of the positivistic views.

the other, and the propriety of their separation as distinct analyses are problems only to be solved by bold and thorough metaphysical speculation. The positivist evades these problems by his assumption of a complete, fixed, and absolute logic, even now in his possession.

If there were such a logic, and he possessed it, the positivist could make good his absolutistic claim. Not possessing it, he is incapable of applying it. Nowhere does he actually carry out his professed intention to clarify and extend the form of empirical theory. He simply and submissively accepts the form and content of science as it comes from the scientist, girding at certain imaginary individuals who he says do otherwise. The multitude of basic or metaphysical concepts involved in contemporary physics he accepts either on the ground of their inductive status, or because they are convenient supports to more specific hypothesis. The concepts of matter, space, energy and its conservation and degradation, epigenesis and evolution, presumably one would suppose also those of dialectical materialism and the economic determination of history, are to be gratefully and uncritically accepted. But as he proceeds, the positivist's attitude to the sciences becomes less catholic and curiously dogmatic, and he ends by allowing validity only to physics.

Before following him along that road, let us expose the source of all his confusion, which lies in his misconception of the nature and function of logical analysis. All scientific investigation is logical as an attempt to systematize the data of experience. The empirical philosophers of our tradition had just succeeded in repudiating the claim of one systematic form, that of syllogistic logic, to an exclusive authority over empirical investigation, when as a result of an intensified study of mathematical structure there arose a new scholasticism, discovering this time in mathematics the exclusive form of valid knowledge. There appeared men who devoted themselves to a study of the formal character of mathematical constructions, whatever that means. This study is, of course, a sort of logical analysis; but the positivist, as a scholastic or absolutist, sees in it the only valid analysis, and assumes that the empirical scientist is doing much the same thing. In truth, however, the sort of analysis which is logistic and the sort of analysis which is empirical science are very different things. Logistic is a study of explicit theories, while science is a study of observable nature. Logistic is not concerned with the reference to nature of the theoretical structures it studies or creates; but the structure and content of science are very importantly determined by the observed changes of nature. Logistic will prepare indifferently a geometry in which a point is a little circle, or one in which a circle is a series of points; but science will ask whether this or that natural configuration is in fact Aristotelian or Cartesian.

The degree to which the constructions of logistic can be used in empirical analysis is determined by the scientist, not by the logician. Before 1600 A.D. the investigator inclined to the syllogistic form, since then he has preferred the mathematical, and what he will use a century hence no one can say.

Now the positivist seems willing to distinguish logistic from empirical analysis, and to recognize the ingredience in the latter of an inductive element; but he conceives further of a third sort of analysis which somehow partakes of the nature and privileges of both. He calls this study Applied Logic. This sort of analysis enjoys at once the freedom from empirical limitations which is supposed to qualify logistic and the authority which empirical science owes to its inductive character. As Applied Logic, logistic becomes an absolute natural knowledge; and consistency becomes the sufficient criterion of truth. What the positivist does not see is that when logic is applied to empirical material, it must honestly conform to the latter. When it does so, it produces physics, biology, sociology. The empirical sciences are already applied logic. Logic need not conform in this way if its objective is not truth; but then it produces such fantasies as Carroll's Alice in Wonderland. If the positivist actually applied his logic, he would then merely repeat the speculations of current science. What he offers to us as applied logic is an antiquated epistemology, presented as self-evident truth.

For example, he assumes that empirical science either is consistent, or aims at an absolute consistency. In fact, consistency plays but a subordinate rôle in empirical analysis. The approaches to nature of empirical science are so numerous and varied that the question of the consistency of its diverse speculations is often meaningless. Is physiology consistent with psycho-analysis, and with physics, and with taxonomy? Even within physics, we have a number of molar and microscopic analyses linked together only by observation and fortunate guess-work, as in the kinetic theory of gases. Even within microscopic physics, we sway from the assumption of natural continuity to that of natural discreteness. Consistency, once achieved, would probably close theoretical progress. A second assumption of the positivistic epistemology is that empirical knowledge is what can be unambiguously verified in someone's immediate sensory experience. What then is the status of those large conventions, like the principle of the conservation of energy, which are assumed as the basis of construction of verifiable hypotheses? Since all units of energy are still determined upon the assumption of the principle of conservation, no quantitative measurement can verify it. And what is "immediate sensory experience"? Does the positivist mean by it what Newton meant when he insisted not with-

out reason that gravitation was an observable fact? No, he follows Wittgenstein, whose metaphysic of "atomic facts" recorded in "atomic propositions" is a simple paraphrase of eighteenth-century sensationalism. This intelligible but long since discredited metaphysic is perverted by the positivists into a curious conception of the "protocol," by which is meant anyone's most direct record of perceptible fact. Theoretical knowledge is conceived to be reducible to a sum of such protocol-atoms. The discriminatory and selective character of scientific observation, the rôle of imagination in scientific hypothesis, and the crucial problem of the relation of verbal description to non-verbal experience are all ignored. To follow the positivistic analysis we have to pretend that we inhabit a world composed exclusively of spoken or written language, the latter retaining in some incomprehensible way all the significance it would have in a world of sensory pattern. Even the positivist soon finds this pretence intolerable, and assigns to himself a blanket license to refer to the world of ordinary experience, under the new pretence that all such references shall "in theory" be translatable into propositions about propositions. Carnap helps us here by drawing a line down the middle of his page, and putting the statements about statements on the left, the correlative statements about things and qualities to the right. Still it does not occur to him that the right-hand column is what gives significance to the left-hand column; and when the positivistic, left-hand statements become unintelligible, even to himself, he just leaves the right-hand column blank.

But leaving material criticism of the positivistic epistemology to one side, by what intellectual duplicity can "protocols," sensible experiences, personal communications, and the other entities discussed in the positivistic analysis be conceived as elements of a purely logical and therefore non-metaphysical study? The primacy of immediate over mediate knowledge surely involves assumptions concerning time, space, man and his environment, human trustworthiness, and finally the whole qualitative form of nature.

The last conclusion of this "logical analysis of science" is, that physics is the sole valid science. If we are at first somewhat astounded that a purely formal analysis should culminate in so material and portentous a proposition, our surprise vanishes as we recollect that something very like this was after all involved in the presuppositions of positivism. For by logic the positivist means mathematical logic, an abstraction from the mathematical constructions which have always constituted the anatomy of physical science. It is, after all, the mathematical physicists who made contemporary logic, and not the logicians. What less surprising than that the logician should find in his logic the form of physical theory? Or

that his pretended demonstration of what he had really assumed to begin with should be irrelevant? Physics, he argues, deals only with measurable space-time relations. All immediate data are spatio-temporal quantities. Therefore all immediate data are reducible to physical description. The logic is bad, the middle term being undistributed; and both premises are false. That would not necessitate the falsity of the conclusion; but once more, how are we to understand such demonstration as innocent of metaphysic?

Logical positivism turns out to be nothing more nor less than a narrow and dogmatic predilection for mathematical physics. The scholastic of the Renascence insisted that the relation of a species to its genus, as formalized propositionally in the syllogism, was the only valid principle of science. The scholastic of today insists that only mathematical relationship is real. Such complete lack of imagination as theirs is a major cause of our intellectual inertia. "Supposing a tree fell down, Pooh, when we were underneath it," asks the imaginative Piglet in the storm. "Supposing it didn't," says after careful thought Pooh—the logician.

And yet, when we consider this neo-positivism as a social phenomenon, and remember the threat to Vienna of that movement from the north which will presumably wipe out this hardy little band of logical bigots along with any other last remnants of the Holy Roman Absolutism, we may well feel moved to a more lenient judgment. Perverted and desperate as is the positivist's beatification of logistic, it reminds us of the common humanity vocal in a universal theoretical science of nature. Abstracted from the specific physical or other empiric of which it is the syntax, logic is nothing; but replaced in its empirical matrix, it is the promise of a language that some day, when it is grown to maturity, may unite a human family.

HUGH MILLER.

UNIVERSITY OF CALIFORNIA AT LOS ANGELES.

BOOK REVIEWS

Plato's Theory of Knowledge. FRANCIS MACDONALD CORNFORD. New York: Harcourt, Brace & Co. 1935. xiv + 336 pp. $4.50.

This book, which forms another volume in the International Library of Psychology, Philosophy and Scientific Method, consists of a translation of the *Theaetetus* and the *Sophist,* with a running commentary interpolated after each compact section of the text. And it may be said at once that the author, who is Laurence Professor of Ancient Philosophy at Cambridge and well known among students of Greek thought, has accomplished an admirable piece of

interpretation and made a noteworthy contribution to our understanding of Plato.

There is a short introduction, placing the two Dialogues in the series and defining the position from which the inquiry starts. The author believes that recent research has established the fact that the *Parmenides, Theaetetus, Sophist,* and *Politicus* form a group later than the *Meno, Phaedo,* and *Republic,* but earlier than the *Timaeus, Philebus,* and *Laws.* The introduction is accordingly devoted largely to an exposition of the *Parmenides,* which gives the setting for the two dialogues under discussion.

The translation follows Burnet's Greek text in the main; but there are numerous emendations of great interest, which obviously spring from a fine classical scholarship. Moreover, the nicest historical feeling is constantly revealed in the choice of words that give Plato's meaning without too much modern connotation; and terms like subjectivism, relativism, and sensationalism, "the misleading jargon of modern philosophy," are not employed. Furthermore, attention is paid to the precise definition of such ideas as "dynamis" and "doxa," and there is a careful consideration of the sense in which Logic may be attributed to Plato. Yet this historical investigation into the past does not prevent the activity of a genuine philosophical interest, and questions regarding the value of Platonic theories are fairly debated. In short, this work exhibits that rare blending of the historical and the philosophical inquiries that is the mark of the best scholarship outside the natural sciences.

Professor Cornford does not directly raise the problem of development in Plato's thought—and wisely perhaps, for it is difficult to avoid expressing it in a form that does not suggest a one-sided answer; but a careful reading of the book leaves no doubt about his position. There are fundamental features that give a unity to all Plato's philosophy, to use Professor Shorey's phrase; and the author feels at perfect liberty to quote the *Phaedo, Republic,* and *Phaedrus,* for example, in illustration of ideas in the two dialogues under discussion. In particular, he makes it abundantly clear that the Forms remained an essential element in Plato's later thought, which should be used to correct Professor Taylor's misleading reference to a "silence" regarding the doctrine of Forms in the Dialogues after the *Republic* except in the *Parmenides,* where it is criticized, and the *Timaeus,* where it is put into the mouth of a Pythagorean (*Plato: The Man and His Work,* p. 348). On the other hand, Professor Cornford again and again shows that the later dialogues suggest advances over the earlier ones, so that such unity as there is in Plato's thought, like that of an organism, is consistent with plurality and development.

This sensible attitude toward the total situation does not, however, relieve the commentator from the difficulty of determining just how far a particular passage modifies earlier statements on the same subject. Professor Cornford is most helpful in trying to be explicit in this respect, giving "the inference" (p. 45), or "the conclusion Plato means us to draw" (p. 99), or "the gist" of an argument (p. 243), or " filling out Plato's scheme with elements he has furnished elsewhere and here takes for granted" (p. 314). While this procedure is practically necessary and in the present instance highly successful, yet it always involves the danger of imputing too much; and that this danger is not wholly avoided in the volume under review seems to be indicated by its interpretation of the most important Forms. There is the categorical assertion (p. 270) that "in Plato's view the highest Form, whether it be called 'Being' or 'the One' or 'the Good,' must be not the poorest but the richest" (the illustration on p. 271 and the explanation on the following page suggest the opposite—that the specific qualities of parts are "added" to the whole. While the conception of the world as an animal in *Timaeus* 30 A confirms this view, yet that it is the whole story would be admitted only by those who believe Plato eventually found a satisfactory relation between the ideas of soul-cause and form-number. The truth seems to be that in his philosophy the germs of two hierarchies lie latent, the one a hierarchy of richer and richer concretion, in which the part is deprived of some characters in the whole, leading to mysticism; and the other, a hierarchy of wider and wider abstraction, in which the specific differences of part disappear in the whole, leading to logic.

The many virtues of the present volumes will undoubtedly cause students of Plato to hope that Professor Cornford will find time to elucidate the *Philebus* by the same method.

R. S.

A History of Science, Technology and Philosophy in the XVIth and XVIIth Centuries. A. Wolf. New York: The MacMillan Company. 1935. xxvii + 692 pp. $7.00.

Intellectual history in its present phase tends to be synoptic, and contributions to it can consequently be reported most simply by indicating the strands of evolution which the author has chosen to juxtapose and the order of their juxtaposition. Professor Wolf is concerned with the history of science in its various departments, traced on the pattern of the history of scientific inventions and scientific techniques; this account is supplemented by a history of contemporary technology and philosophy, for the influence of technology and philosophy on science as Professor Wolf writes its his-

tory is less immediate and essential than the influence of instruments. The virtues of Professor Wolf's method are evident in the ponderous tome he has written: the student (the book is intended primarily for the university student of the history, methods, and principles of science) will find nowhere else so intelligible an account of the invention of scientific instruments and their effect on the course of science; nor will he find another historian of science who pursues Professor Wolf's method of analysing the contents of the books of great scientists so conscientiously; nor will he find another book in which science is understood so broadly and its history pursued through so many branches and through the contributions of so many workers.

These virtues are so apparent in Professor Wolf's book that one may be pardoned for turning from them to consider the characteristics of his encyclopedic ordering of the scientific history of two centuries which are consequent to them. It is interesting that although scientific academics and scientific instruments are crucial to the story and their evolution must be told at the beginning (chapters IV and V) before the work of even Tycho Brahe and Kepler is related, the evolution of philosophy is no longer of fundamental importance, as it would have been in earlier histories of science, but is narrated without great consequence in the twenty-sixth, that is, the last chapter of the work—as an aid, to quote the preface, "to the understanding of the general intellectual orientation of its scientists." (p. xxv). One of Professor Wolf's theses is that philosophy and science were first distinguished from each other in the modern period, and philosophy is so sharply distinguished from science in his book that it may be treated as an appendage, without great influence in the scientific activity of the age. It does not appear from Professor Wolf's book, therefore, that few philosophers of the "century of philosophers" would have acquiesced in such a separation, nor that the ideal of a universal science (based on excellent medieval antecedents) was one of the persistent concerns of philosophers of the sixteenth and seventeenth centuries. The evolution of thought during the two hundred years involves consequently as a starting place the mythical authority-ridden Middle Ages which is beginning to disappear from our histories of thought under the impact of recent medieval scholarship; apart from passing acknowledgments to the continuity of thought and the acuity of the medieval mind, Professor Wolf makes no use of the late medieval writers whose work prepared for the theories of the heroes of his narrative. Galileo "first introduced the idea of uniform acceleration, as distinguished from uniform velocity" (p. 39); the shackles of scholasticism, the dependence of writers before the sixteenth century on

authority, their refusal to see the world with their own eyes and interpret it with their own intelligence appear in every reference to the beginnings of modern thought; and behind them is always the malign influence of the Church which "had set up the philosophy of Aristotle as authoritative in all matters of philosophical and scientific theory which did not conflict with Church Dogma" (p. 629).

To turn to positive consequences, Professor Wolf apparently felt the need of a general view of science to introduce some unity into his history, for he rushes the early chapters of his work to arrive at the Newtonian Synthesis (which was completed at the very end of the period designated in his title) in Chapter VII, before undertaking the nineteen chapters on mathematics, mechanics, the various branches of physics, meteorology, chemistry, geology, geography, biology, medicine, technology, psychology, social science, and philosophy; one might even venture to say that it was a philosophic point of view, since Newton is also the last philosopher of the last chapter on philosophy and he forms the end as well as the climax of the history. Yet the lines are not so simple, for the last sentences of the book make it clear that Newton was not the perfect philosopher; Spinoza, on the contrary, was the neglected genius of the age, yet there is in the 700 pages no word concerning Spinoza's deep opposition to the British conception of science which he stated so forcefully and clearly in his controversy with Boyle. Indeed, the opponents of the dominant view do not in general appear in these pages. On questions of scientific method, there is a similar simplification and consequent confusion: there are apparently only two methodological creeds after the "authorities" of the Middle Ages have been overthrown: empiricism and a rationalism born of the mathematical method and given to an unjustified enthusiasm for deduction. Thus Hobbes is an empiricist like Bacon, but in his interest in mathematics has affiliations with Galileo (p. 641); Descartes' criticisms of Hobbes and Galileo can be ignored, "his mathematical methodology assumed the form of a mathematical physics or mechanics, more or less after the manner of Galileo, but not so extreme as that of Hobbes" (p. 646); Spinoza's concern with the methodology of science and philosophy can be passed by, save perhaps in the designation of him as a rationalist, as can likewise the numerous inquiries of Leibniz into the general questions of method, as distinguished from his purely mathematical works. The evolution of conceptions and changes in definitions fall unnoticed into the same limbo; thus Newton's first law of motion "had been clearly enunciated by Descartes" (p. 155) in spite of the fact that the concepts of "body" and "motion" were so different in the two writers that the same statement would have a totally different mean-

ing in their respective systems. What emerges from these considerations is the inescapable conclusion that Professor Wolf's history of science, technology, and philosophy is a history of the discoveries, experimental techniques, doctrines, and beliefs of scientists but is unconcerned with the concepts, theories, systems, and intellectual methods of science. His work displays the virtues and defects of his approach: it is a mine of information, but it might be questioned whether the reader will come from it with an understanding of science as it was conceived in the sixteenth and seventeenth centuries.

R. McK.

Sinn, Bedeutung und Auslegung der Heiligen Schrift in Hegels Philosophie. Mit Beiträgen zur Bibliographie über die Stellung Hegels (und der Hegelianer zur Theologie, Insbesondere) zur Heiligen Schrift. (Studien und Bibliographien zur Gegenwartsphilosophie. Achtes Heft.) OTTO KÜHLER. Leipzig: S. Hirzel. 1934. xii + 110 pp. 4 M.

The revival of interest in Hegel's systematic philosophy in Germany during the last twenty years, while Hegel's influence in the English-speaking countries was declining, did not extend to his philosophy of religion. The only attempt to influence theology by Hegelian thought, that of Lasson, did not succeed. Schelling under the mask of Kierkegaard was victorious over Hegel. Moreover Kühler, the author of the present study and the most recent interpreter of Hegel's philosophy of religion, is himself no Hegelian. He sees clearly the limits of Hegel's theory of religion as viewed from the standpoint of theology. It is necessary for Hegel to devaluate the Holy Scriptures in accordance with his principles. The concept of the God of the Old Testament is for him only one of the manifold shapes in which the World Spirit manifests himself (as is the concept of the Gods in Greek or Persian religion on another stage). In a similar way the story of facts in the New Testament for Hegel must be devaluated by a spiritual, symbolic interpretation of these facts. The significance of Christ must be disparaged in favor of the Holy Spirit which is more easily adaptable to the principles of Hegelian philosophy. But Kühler does not emphasize the negative side alone of Hegel's interpretation. Against the primitive historism for which the historical authenticity of the New Testament story is the only important question, Hegel stresses the importance of a spiritual interpretation and Kühler agrees with him. Kühler's little book is throughout a judicially balanced analysis of Hegel's position.

M. A. G.

Recherches sur la Préparation Évangelique d'Eusèbe et l'édition perdue des oeuvres de Plotin publiée par Eustochius. PAUL HENRY. (Bibliothèque de l'École des Hautes Études, Sciences Religieuses, Vol. L.) Paris: Ernest Leroux. 1935. xii + 143 pp. 40 francs.

Students of the history of philosophy and doxography in every generation since the humanists prepared the first editions of the *Praeparatio Evangelica,* and scribes even before the Renaissance, have found documents in that rich receptacle of quotations with which to alter the contemporary conception of ancient thought. Now M. Henry, who has announced the publication of a volume of *Plotinian Studies* devoted to the text of Plotinos, has produced, from the examination of the two lengthy passages which Eusebius quotes, important data concerning the work of Plotinos and the history of the text. Though the passages constitute only a small part of the *Enneades* they contain a remarkable diversity of information, as if they had been arranged experimentally to exhaust all possible relations to the ordinary text of the work. The two sections which are cited are the treatise *on the Three Principal Hypostasies* (*Enneades* V, 1), which appears in Book XI of the *Praeparatio,* and the treatise *on the Immortality of the Soul* (*Enneades* IV, 7), which appears in Book XV. The later citation is made up of three parts, the first of which is found in none of the manuscripts of the *Enneades,* the second in all manuscripts of the *Enneades,* and the third in only three (one of which is a copy of the first, and the third of which is now "lost"). A careful comparison of the manuscripts of the *Enneades* and those of the *Praeparatio,* leads M. Henry to conclude that Eusebius quotes another and earlier edition of the works of Plotinos than that prepared by Porphyry under the name of the *Enneades,* and further that the edition was probably that of Eustochius, the existence of which is attested in the *Enneades.* He lists the variations in readings of those portions which appear in both the *Enneades* and the *Praeparatio* (they average about one every three lines), undertakes to prove that the first section cited in Book XV is authentic though it does not appear in the *Enneades,* and that the third entered the manuscript tradition of the *Enneades* from Eusebius. The portions of the earlier edition thus preserved can be used in the study of Plotinos's style, since it was prior to the corrections of Porphyry, and in checking the manuscripts and evolution of Porphyry's edition. Strangely enough the readings from Eusebius tend to reinforce the text of Porphyry and to remove from the text of modern editions false corrections that have ironically been advanced on the authority of Eusebius. M. Henry's study affords abundant and distressing examples of the unsatisfactory state of

our present editions of Plotinos, and suggests the hope that his announced *Studies* may pave the way for a critical edition.

R. McK.

La notion de fait psychique. Essai sur les rapports du physique et du mental. ROBERT BLANCHÉ. Paris: Félix Alcan. 1935. 401 pp. 40 francs.

M. Blanché's theory of the relation between the mind and the body depends upon two fundamental notions: (1) the notion of the mental as *la pensée,* which would seem to be the activity of forming judgments; (2) the notion of somatic duality, according to which the body is both a physical object like any other, a system of sensory data which are neither private nor peculiarly related to any perceiving subject, and a unique point of reference from which the perspectives of human experience are projected. *La pensée* is not a group of static images or other forms of mental content, but actual assertions, which are therefore not to be treated as the data of physics, but as the subject-matter of logic. His dualism is a dualism of judgment and subject-matter, rather than of mental content and object. In this he seems to revert to an epistemology like that of Aristotle in which knowledge was something which could be true or false but not real or unreal. This being so, his problem is to show how what is commonly called the subjective element in our behavior depends upon our judgments and a highly intellectualistic psychology results, so intellectualistic in fact that he argues strongly against some of the more fashionable psychologies of to-day in which emotions and the subconscious have been taken as the guiding forces of our lives.

His theory of somatic duality he considers one of his major contributions to the discussion, though he acknowledges his debt to M. G. Marcel and the similarity of his theory with that of Mr. Stout. And indeed his use of it is novel and at least to this reviewer of great interest. That one's body as one's own has a privileged position in the world of experience is undeniable, and M. Blanché makes out a good case for its importance in causing the distinction between subjective and objective. There are thus two dualities recognized by him: that between *la pensée* and its subject-matter, that between the two bodies.

It is not too extravagant to say that this book is a major contribution to the mind-body problem, written with distinction and argued with force and often with persuasion. It is concluded with three appended articles on the relation of physical and mental in neutral monism, Mach's theory of sensation, and James's theory of consciousness.

G. B.

Objektivität, Voraussetzungslose Wissenschaft und Wissenschaftliche Wahrheit. FRIEDRICH WEIDAUER. Leipzig: S. Hirzel. 1935. 38 pp. 1.50 M.

Husserl's claim that phenomenology can be presuppositionless has called forth many critics wherever his philosophy has penetrated. Dr. Weidauer, who attacked this pretention in *Kritik der Transcendental-Phänomenologie Husserls,* 1933, decides in the present book that the "transcendental subjectivity" depends upon a scientific hypothesis, a material assumption. Similarly, all sciences which assume the existence of a space-time world, for which neither strict evidence nor disproof is available, are non-presuppositionless. Only such sciences as arithmetic, which eschew existential assumptions, are presuppositionless. *Weltanschauliche* judgments can not serve as "presuppositions" to any science, the author warns us, since they are not "objective," i.e., they arise not from uninterrupted fixation upon the cognoscendum, but from feeling.

The four essential characteristics of scientific truth are (1) eternity and correspondence with fact, (2) intersubjective validity, (3) permanent value, (4) locus in a system of factual truths of permanent value. If all scientific truths are non-value judgments, a fifth characteristic should be added, the author suggests; but eventually concludes that certain value-judgments are scientific truths since they conform to the four criteria above. Thus, such judgments as: the Führer is more valuable than his followers, made upon the assumption that the welfare of one's own people is the fundamental (intrinsic) value, is, the author thinks, scientific. He fails to point out the obvious difference that, namely, real scientific truths are acceptable to all nations and economic classes, while the superior merit of the Führer is not. What is ethical for one nation or class is wormwood for another. The author rejects ethical relativity, but he can not escape from it by tacitly identifying "one's own people" with all rational beings, or with "all people of normal (healthy) faculties." The book is interesting, however, and not less so because of the imprint it shows of the current political life.

V. J. McG.

Charles Maurras und die Weltanschauung der Action française. Mit einer monographischen Bibliographie Charles Maurras. HANS NAUMANN. (Studien und Bibliographien zur Gegenwartsphilosophie.) Leipzig: S. Hirzel. 1935. xii + 94 pp. 3.50 M.

This is an excellent critical monograph, outlining the philosophical orientation of the *Action française.* The author shows how Maurras derived his ontology and philosophy of history from posi-

tivism, which he regarded as a "secularized Thomism," and how his "positive politics" is an attempt to reconcile classicism with a realistic interpretation of experience. On the whole, however, it is clear that the basic theory of order is developed by Maurras more as a philosophy of art than of science, or, for that matter, more as a program for action than as a philosophy.

H. W. S.

Imagination and Human Nature. LIVINGSTON WELCH. (Psyche Monographs, No. 3.) London: Kegan Paul, Trench, Trubner & Co., Ltd. 1935. 223 pp. 7s 6d.

The author has summarized industriously the opinions of philosophers and psychologists concerning the nature of the imagination. Students will find the book a useful aid to further study, but as it stands, it is chiefly an illustration of the endless ambiguities of philosophical terminology. It throws little light on what the imagination really is. The style is monotonous, and the proof-sheets have not been adequately corrected.

H. T. C.

Paul Elmer More and American Criticism. ROBERT SHAFER. New Haven: Yale University Press. 1935. ix + 325 pp. $4.00.

Beginning with rather more chastisement of contemporary American critics than with eulogy of Mr. Paul Elmer More, this aggressive monograph comes as a belated echo of the scuffle over humanism in 1930. Still eager for the fray, Professor Shafer appears to be engaged in launching lusty blows upon the deserted air of a former battlefield. Criticism is only anti-criticism unless it is philosophic; and there is no philosophy worthy of the name save dualism. It is the misguided "revolt against dualism" which has "in our day made philosophy a byword for incomprehensible, pretentious nonsense." Everything hinges upon "the establishment of a comprehensive principle of evaluation" which shall enable modern man to avoid both the "spiritual emptiness of scientific naturalism" and the anarchistic excesses of unbridled romanticism. Mr. More's career is surveyed as a life-long attempt to accomplish this task, "to make sense out of life" in dualistic terms:—"an inward conflict between the forces of real good and real evil." His work "from first to last has been an attempt to conserve and revivify what some historians and critics regard as the romantic conception of human nature." Professor Shafer expounds persuasively the still vague mortality of the inner check; and even carries his loyalty to the point of defending Mr. More as a social philosopher. When he comes to the six volumes (to date) of *The Greek Tradition,* however, he finds himself

somewhat baffled by his master's changes of position, and particularly by the ambiguity evident in his final acceptance of modern Anglo-Catholicism as the heir of true Platonism. Yet he holds that "it will be found that where we can not go with Mr. More he himself has not been entirely true to his own critical principles." Throughout the volume much stress is laid upon the alleged misrepresentations of his ideas by nearly everyone who has written about him, examples of which are supplied in an appendix, together with some of his early excursions into verse. Professor Shafer's counter-attacks upon these supposed enemies of civilized humanity are more polemical than philosophic; and give few positive indications of how future American critics may succeed in becoming more truly Christian than Mr. More.

H. A. L.

La méthode synthétique d'Hamelin. LESLIE JOHN BECK. Paris: Fernand Aubier. 1935. 254 pp. 15 francs.

This little book will provide an authoritative introduction to the philosophy of one of the lesser known French philosophers. Hamelin's type of thinking is no longer in fashion and it is indeed doubtful whether anyone of our time would turn to it for a solution of his problems. It is ultra-rationalistic in the Hegelian sense and is primarily concerned with finding the "unity" of the world in a deduction of the categories. This type of reasoning enjoyed, of course, great prestige in the nineteenth century and is not without its analogue at the present time: witness the vogue of symbolic logic. It would perhaps be enlightening, if there are philosophers who believe in the spontaneous fertility of deduction, for them to read Mr. Beck's book and see how it was ordered in France.

G. B.

Recht und Sittlichkeit. RUDOLF LAUN. Dritte Erweiterte und Vermehrte Auflage. Berlin: Julius Springer. 1935. v + 109 pp. 4.80 M.

This little volume contains as the first of its six parts a reprinting of the author's address of 1924 as rector of the University of Hamburg, in which he expounds his theory of the autonomy of legal right, that is, of the identity of morality and legal right, both being based on the voluntary recognition or inner experience of an unconditional Ought. The remaining parts of the book are expansions of this theme. Dr. Laun attempts to show that Kant's Copernican Revolution in morals was not achieved in his philosophy of law because he followed the conventional notion that law is based on coercion (heteronomous). The positivistic conception of law has

continued to divorce moral imperatives and legal commands. The author carries the Kantian distinction between fact and right into the domain of law, claiming that no act of command can be rightful unless it is freely acknowledged to be so by the moral subject. The ultimate source of right is therefore neither nature nor reason, but the people's sense of right (*Volksrecht*), and the right administered by the courts (*Juristenrecht*) is merely derivative. The true "division of powers," therefore, rests on the fact that the legislator is really subject to his subjects' sense of what law ought to be. "Neither the relations of production and exchange nor 'blood and soil' can of themselves make right, but to them and to other material conditions must be added the autonomous experience of conscience and the sense of right. But this experience is an independent . . . factor in the course of events" (p. 98).

H. W. S.

OTHER NEW BOOKS AND JOURNALS

Tomomatsu, Entai: Le Bouddhisme. Traduit par Kuni Matsuo. (Les Religions) Paris: Félix Alcan. 1935. viii + 292 pp.

James, Herman Ralph: The New Individualism or The Message of the Church to Industry. Printed for the author by The Ryerson Press, Toronto. 12 pp. 10 cents per copy.

"Das Problem des Lebens. Zur Lebenslehre in der gegenwartigen Biologie" by A. C. Coutinho. Article in *Geistige Arbeit,* Nr. 12, June 20, 1935. Berlin: Walter de Gruyter & Co. Pp. 7–8.

PHILOSOPHICAL REVIEW. Vol. XLIV, 5. The Place of Telesio in the History of Philosophy: *Neil Van Deusen.* Plato on Scientific Measurement and the Social Sciences: *L. M. Hammond.* The Logic of Relativity: *Henry Lanz.* Discussions—The Paradox of Certainty: *P. A. Schilpp* and *H. H. Dubs.* A Note on Probability and Ontology: *H. D. Roelofs.*

PHILOSOPHY OF SCIENCE. Vol. 2, No. 3. Philosophy of Science and Science of Philosophy: *C. W. Morris.* Metaphysics for Positivists: *Charles Hartshorne.* Stability in Causal Systems: *G. D. Birkhoff* and *D. C. Lewis, Jr.* An Examination of the Quantum Theories. IV: *W. M. Malisoff.* A Critique of the Species Concept in Biology: *Th. Dobzhansky.* Psychology versus Immediate Experience: *E. C. Tolman.*

REVUE PHILOSOPHIQUE. 60e Année, Nos. 7 et 8. Religion et moralité: *M. Pradines.* Le mythe de l'espace: *J. D. Ghéréa.* Le hasard dans la nature et dans l'histoire: *J. Delevsky.* L'imitation dans les beaux-arts: *J. Pérès.*

REVUE DE MÉTAPHYSIQUE ET DE MORALE. 42e Année, No. 3. Un Échange de Lettres, édité par R. B. Perry: *Ch. Renouvier* et *W. James.* Ce que la microphysique apporte ou suggère à la philosophie (*suite et fin*): *Ed. Le Roy.* Pascal et Voltaire: raison ou sentiment: *J. R. Carré.* Variations du style mathématique: *C. Chevalley.* Le destin de l'Europe: *Th. Ruyssen.*

ERKENNTNIS. Band 5, Heft 4. Die Bedeutung der Negation. Grundzüge der empirischen Logik: *Karl Dürr.* Über den Gehalt von Wahrscheinlichkeitsaussagen: *C. G. Hempel.* Bemerkungen zu Carl Hempels Versuch einer finitistischen Deutung des Wahrscheinlichkeitsbegriffs: *Hans Reichenbach.* Über Induktion und Wahrscheinlichkeit: *Hans Reichenbach.*

GIORNALE CRITICO DELLA FILOSOFIA ITALIANA. Anno XVI, Fasc. III. Infinità dell'istante e infinità soggettiva del pensiero degli antichi: *R. Mondolfo.* Spunti cartesiani nella filosofia arabo-giudaica (cont. e fine): *J. Teicher.* Gli scritti filosofici di Giovita Scalvini: *F. Castellani.* Misologia?: *G. Calogero.* La non *docta ignorantia* del P. Gemelli: *G. Saitta.*

NOTES AND NEWS

Richard McKeon, formerly Assistant Professor of Philosophy at Columbia University, is now Dean of the Division of Humanities and Professor of Greek at the University of Chicago.

With the publication of an excellent translation of Pareto's Sociology, new interest attaches to the course in his political philosophy to be given at the New School for Social Research, New York City, by Professor Max Ascoli of the Graduate Faculty of Political and Social Science. Professor Ascoli, with his first hand knowledge of Fascism, is particularly well equipped to evaluate Pareto's contribution to political thought in the complex of modern political ideas.

An attempt to formulate a modern and more efficient logic is the aim of Dr. Boris Bogoslovsky's series of fifteen lectures in which he will consider contemporary and earlier logical systems as well as the thinker's unconscious logic. His published outline indicates a discussion of the classical normative absolutistic and static logic vs. the modern experimental relativistic and dynamic logic, of what he calls absolutistic relativism vs. relativistic relativism, and of logic analysis or the determining of characteristic logical patterns of individual thinkers and different social groups.

Professor Max Wertheimer, founder of the Gestalt Theory, will give a course on Better Thinking in its Psychological Aspects at the New School.